second PCB, a host control processor, which communicates with the machine control processor, and includes the user interface controls and controls for the remote agent subsystem (described in more detail below), including the logging system, amongst other controls. A third PCB, the power PCB, may also be included which includes all of the controls for the power for the system. The power PCB also communicates with the machine control board. A forth PCB, a personal computer PCB, includes the controls for the personal computer and also communicates with the machine control board and the host control board. This electronics configuration may be beneficial/desirable for many reasons, including, but not limited to, where changes in the memory are desired because of, e.g., software for the user interface, only the host control board is affected and therefore, only one board, the host control board, need be modified and/or replaced. Additionally, this configuration creates a modularized electronics system where systems may be custom fitted to particular locations. For example, various locations may require a more robust user interface, and/or various modes of connectivity, and various locations may require a very simple user interface. For example, some locations may require Wi-Fi, while others do not. Thus, the components for Wi-Fi may be customized onto some host controls boards and not others, to lower the expense where the function is not desired. Various versions of the host control board may be used depending on the systems ultimate location and therefore, the other three PCBs would be identical and only the host control board would differ. Switching out one PCB to customize a system provides versatility and modularity to the system. Additionally, the microprocessor on the machine control board may be smaller than the one used on the host control board. Thus, by separating the two boards, the expense for the machine control board may be less than the host control board because the machine control board may not require a large microprocessor. Additionally, all of the heat dissipating devices may be placed on the power PCB. Thus, this makes the system more efficient for managing heat in the PCBs. In some embodiments, the power PCB may be mounted to a heat sink **10546**, which in some embodiments, may be an aluminum plate (or other heat dissipating metal) pressed onto the back of the electronics assembly, which, in some embodiments, together with the electronics assembly, sandwich the copper tube that feeds source water to the electronics control assembly to provide cooling to the electronics. This cooling fluid line also provides cooling to the power PCB. In some embodiments, a heat sink **10546** temperature controller may be included in the system.

[1035] In various embodiments, the system includes a heat sink valve **10548**. Thus, as source water comes into the system, the source water flows by the heat sink **10546** and in some instances, when the mixing can valve **10550** is open, and the heat sink valve **10548** is closed, will flow to the mixing can **10156**. This provides a cooling loop for the system even when product water is not being made (i.e., the water vapor distillation apparatus is not heating or running) However, when the water vapor distillation apparatus is heating or running, the source water comes into the system, the source water flows by the heat sink **10546** and in some instances, when the mixing can valve **10550** is closed, and the heat sink valve **10548** is open, will flow to the sump **10354**. Thus, whether or not the system is in run or heat mode, the electronics control module and the heat sink **10546** will be cooled by incoming source water.

[1036] In some embodiments, the user interface may be a smart phone, for example, a QUALCOM-based phone. In some embodiments, the user interface may be a SAMSUNG Galaxy S4, however, in various embodiments; the smart phone may be any smart phone. The smart phone may be customizably programmed and attached to the system.

[1037] In various embodiments, the system may include a tilt sensor, which in some embodiments, may be a 3-axis accelerometer. In some embodiments, the tilt sensor may be positioned on the machine control processor. In some embodiments, the system controls may not allow the water vapor distillation apparatus to run if the system does not meet a threshold level, which the controls system receives from the tilt sensor.

[1038] Some embodiments of the system may include a GPS, which, in some embodiments, may be located on the host control processor. This may be desirable for many reasons, including, but not limited to, remotely tracking the location of the system and therefore, in some embodiments, changing thresholds and other controls based on the location of the system thereby responding to potentially different needs in response to different water and/or climate conditions.

[1039] Referring now also to FIG. **134**, in various embodiments, the can motor may be controlled based on the motor temperature. In various embodiments, a controller receives the motor temperature **10552** and the output is the desired motor speed **10554** and then this runs through a controller limiter/saturation max and min speed **10556**, which yields the commanded motor speed **10558**. This is fed into the motor controller **10560**, which drives the motor **10562**, and then heat comes off the motor which is plugged onto the motor temperature **10564**. In various embodiments, the controller may target 160 degrees Celsius as the motor temperature.

[1040] In some embodiments, the temperature may remain constant but over time, the motor speed may decrease due to decreased efficiency which may be present from time to time due to various conditions, for example, scaling. This controls method is beneficial/desirable for many reasons, including, but not limited to, if the motor speed were constant, than the temperature would rise. This could create negative conditions for the system. Thus, by maintaining a constant temperature, the temperature does not reach a negative level but the motor speed decreases.

[1041] Referring now also to FIG. **135**, in various embodiments, the system includes controls for the low pressure ("LP") water temperature, which refers to the water under low pressure, i.e., the source water, which is in the evaporator side of the evaporator/condenser **10402**. The LP desired temperature **10566** is fed into the heater controller **10568**. Also, an enable signal if fed into the heater controller **10568**. The output of the heater controller **10568** is heater duty cycle/heater drive signal (0 to 100) **10570** and then this is limited (heater limit **10572**), which then controls the actual heater electronics **10574**. The LP temperature is reduced **10576** and it this is fed into the vent controller **10578**. The vent controller **10578** is enabled and a desired temperature is output as a vent valve command **10580**. The command is fed to the vent electronics **10582** which is fed back to the LP temperature desired temperature **10566**. The